

Book Review

Stray Feathers: Reflections on the Structure, Behaviour and Evolution of Birds

By Penny Olsen and Leo Joseph. CSIRO Publishing, Collingwood. 2011; 286 pp; paperback. ISBN: 9780643094932. Price A\$59.95.

Riehard Schodde introduces this book by stating that knowledge of the *what* and the *where* of Australia's birdlife abounds, but we know very little about the *how*: how they move, feed and have evolved their life forms. '*Stray Feathers*' focuses on the how, and it was this approach that enticed me to buy a copy.

This book's genesis is based on illustrations intended for another book that never eventuated. The current authors have opportunistically written short essays to accompany these illustrations and discuss some interesting adaptations of Australia's bird species. The book is organised by theme, such as Anatomy and Physiology, The Senses, Giving Voice, Plumage, Getting Around, Finding and Handling Food, Using 'Tools', Communicating, Courtship, Nests and Parental Care, with about 3 – 10 short sections in each. Each section is one or two pages long, including beautiful black and white line drawings, and uses one species (or closely related species) to illustrate a behaviour or adaptation. There is no index or even an alphabetical list of the names of the species included in the book.

The authors obviously know their subject matter very well, and have done a good job of amassing information on a large range of species, including many lesser known ones. It would be almost impossible not to present lots of fascinating information in a book about evolutionary adaptations in birds, and this is certainly the case for '*Stray Feathers*'. Here is a sample of what I found most interesting:

- The complexity of a bird's jaw and bill, which allows precise manipulations of their food.
 - Birds process heavy food quickly to minimise weight during flight (e.g. the average passage times in fruit eaters are 15 to 60 minutes). Birds have evolved mechanisms to remove water from food about 10 times faster than mammals on similar diets.
 - Have you ever wondered how such small birds can make such loud calls? In birds, sounds are made using nearly all the air passing through the respiratory system, compared with humans, who use only about 2% of inhaled air to speak.
 - Parrots have relatively simple vocal organs, and their talking ability stems from their versatile spoon-shaped tongue.
-

- Treecreepers climb trees from bottom to top, while sitellas spiral head-first from top to bottom. Both have the anatomical adaptations appropriate to their way of moving.
- The wedge-tailed eagle weighs only 3-4 kg, yet its grip is 10 times more powerful than that of the human hand.
- Most Territorian naturalists would have heard about black kites using fire to help with their hunting. However, they may not know that kites have also been observed to drop bread scraps into a river to attract fish to the surface.
- Boobies don't have a brood patch (a highly vascularised, bare-skinned patch that transfers heat from parent to egg), but instead curl their large, fleshy feet over their eggs to keep them warm.
- Australian swiftlet parents often lay a second egg after the first egg is hatched. The first chick incubates this second egg, even developing a brood patch. No other bird is known to use such a strategy, one that seems very sensible to me!

The authors say that the book "is intended as a 'taster' for bird lovers or students who wish to gain some insight beyond a simple enjoyment of birds", but the style sits uneasily between the technical and the popular. Thus, while the concept is inherently appealing to popular audience, the style is often turgid and academic, and full of difficult technical terms that only an expert would understand. For example, the first sentence in the piece 'Swimming on land: Short-tailed Shearwater' is: "On the ground most procellariids shuffle along on their tarsi (lcgs)." A lay reader is just left to assume that the procellariids include shearwaters – but what else? It then says that shearwaters have "backwardly placed legs" – what are these exactly? It does not explain, and again I was left feeling vaguely unsatisfied. There are numerous instances where an idea is inadequately explained, and the illustrations, while lovely, could do with more detailed captions to help explain the point the text is trying to make. In addition, unless you are very familiar with Australian bird species, you will probably want to read this book together with your favourite bird ID book, so you can get some more general background about each species – especially simple distribution maps. The lack of an index is a serious drawback if you want to use it as a reference book. Most of all, this book would have greatly benefitted from an editor experienced in communicating science, which would have boosted its appeal to a general audience.

Overall, I was a little disappointed in this book. While there is much to commend it, it is not as good as it could be. The wonderful adaptations of birds deserve to be communicated in a more engaging way to the general public.

Lynda Prior
School of Plant Science, University of Tasmania
Email: lynda.prior@utas.edu.au